SILVA BALCANICA

Silva Balcanica 22(3): 5-16 (2021)
doi: 10.3897/silvabalcanica.22.e77434

RESEARCH ARTICLE

New data on the distribution and host plants of subfamily Buprestinae (Coleoptera: Buprestidae) in Bulgaria

Vladimir Sakalian[1], Enrico Migliaccio[2], Victor Gashtarov3, Danail Doychev[4], Georgi Georgiev[5]

[1]*Institute of Biodiversity and Ecosystem Research, Bulgarian Academy of Sciences, 1 Tzar Osvoboditel Blvd., 1000 Sofia, Bulgaria*
[2]*Science Naturali ed Ambientali, 47 Via Duccio Galimberti, 00136 Roma, Italy*
[3]*PO Box 470, 1000 Sofia, Bulgaria*
[4]*University of Forestry, 10 St. K. Ohridski Blvd., 1797 Sofia, Bulgaria*
[5]*Forest Research Institute, Bulgarian Academy of Sciences, 132 St. Kliment Ohridski Blvd., 1756 Sofia, Bulgaria*

Corresponding author: Georgi Georgiev (ggeorgiev.fri@gmail.com)

Academic editor: Margarita Georgieva | 1 November 2021 | Accepted 24 November 2021 | Published 10 December 2021

Citation: Sakalian, V., E. Migliaccio, V. Gashtarov, D. Doychev, G. Georgiev. 2021. New data on the distribution and host plants of subfamily Buprestinae (Coleoptera: Buprestidae) in Bulgaria. Silva Balcanica 22(3): 5-16 . https://doi.org/10.3897/silvabalcanica.22.e77434

Abstract

Data about the distribution and host plants of 47 species group taxa from subfamily Buprestinae are presented. In this study, three localities of *Anthaxia* (*Anthaxia*) *suzannae* were reported for the first time in Bulgaria. In addition, *Paliurus spina-christi* was established as a new host plant for *Chrysobothris leonhardi*.

Keywords

Buprestidae, Buprestinae, distribution, host plants, Bulgaria

Introduction

The Buprestinae subfamily includes 604 species and subspecies in the Palaearctic region (Kubáň et al., 2016) and 62 are known from Bulgaria (Sakalian, 2003).

Copyright *Vladimir Sakalian*. This is an open access article distributed under the terms of the Creative Commons Attribution License (CC BY 4.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

The aim of this work is to present unpublished data about the distribution and host plants of buprestids from the Buprestinae subfamily in Bulgaria.

Material and Methods

The biological material was collected by traditional entomological methods: collection from flowers and bushes by entomological net; collecting by soil traps, yellow tree traps, Malaise and pheromone traps; rearing of adults in laboratory conditions from infested parts of host plants.

Faunal information received from Dr. Manfred Niehuis is also mentioned. This information does not contain data about the number of specimens found for each species or subspecies, that is why these taxa are listed below without specifying the number.

The current status, synonyms and combinations concerning Bulgarian taxa published after summarizing publications of Sakalian (2003) and Sakalian, Langourov (2007) are reported according to Kubáň et al. (2016). The names of tribes and species and subspecies are listed in alphabetical order.

Bulgarian geographical regions are presented according to Guéorguiev et al. (1997).

The collections where the studied specimens are kept, are listed in the text below. In this work, the following abrevitions are used: DD – collection Danail Doychev; EM – collection Enrico Migliaccio; GG – collection Georgi Georgiev; p.c. – personal communication; VG – collection Victor Gashtarov; VK – collection Vit Kubáň; VS – collection Vladimir Sakalian.

Results and Discussion

Subfamily Buprestinae Leach, 1815
Tribe Anthaxiini Gory & Laporte, 1837

***Anthaxia* (*Anthaxia*) *anatolica anatolica* Chevrolat, 1838**

Material. Thracian Plain: W Stryama, 42°14′55″N, 24°51′93″E, 174 m, 25.04.2018, 1 ex., leg. T. Lyubomirov (VS); North Black Sea Coast: Albena, 28.06.2004, leg. W. Ziegler; South Black Sea Coast: Ustrem, 15.05.2002; Veselie, 16.05.2002; Yasna Polyana, 17.05.2002, leg. Schmitt (Niehuis p.c.).

***Anthaxia* (*Anthaxia*) *bicolor bicolor* Faldermann, 1835**

Material. East Danubian Plain: Granichar, 43°43′24″N, 28°30′14″E, 43 m, 23.07.2017, 3 ex., leg. N. Karaivanov; N Granitchar, 43°43′45″N, 28°30′26″E, 59 m, 11.06.2018, 3 ex., leg. T. Lyubomirov; Central Stara Planina Mts: Kutelka protected area, 42°43′40″N, 26°19′53″E, 626 m, 02.06.2014, 1ex., leg. T. Ljubomirov; Thracian Plain: Asenovgrad, 27.09.1961, 1 ex., leg. N. Atanasov; E Tatkovo, 41°58′53″N, 25°35′34″E, 293 m, 08.06.2016, 1 ex., leg. T. Ljubomirov (VS); Sakar-Tundzha Region: Elhovo, Popovo, 15.05.2002, leg. Schmitt (Niehuis p.c.); Stranzha Mt.: S Byala Voda,

42°08′22″N, 27°26′44″E, 191 m, 29.05.2012, 2 ex.; Maleshevska Planina Mt.: N Gorna Breznitsa, 320 m, 03.05.2003, leg. T. Lyubomirov (VS); South Black Sea Coast: Djuni south of Burgas, 27.06.2004; Sozopol, 29.06.2004; Primorsko, 01.07.2004; Achtopol, 02.07.2004; Varvara, 02.07.2004, leg. W. Ziegler (Niehuis p.c.).

***Anthaxia* (*Anthaxia*) *brevis brevis* Gory & Laporte, 1839**

Material. Sakar-Tunzha Region: 1.3 km SE of Lyubimets, 41°51′51″N, 26°05′32″E, 130 m, adults in dry branch of *Pistacia* sp., 3 ex., leg. D. Doychev (DD); Maleshevska Planina Mt.: N Gorna Breznitsa, 320 m, 03.05.2003, 5 ex., leg. T. Lyubomirov (VS).

***Anthaxia* (*Anthaxia*) *chevrieri* Gory & Laporte 1839**

Material. Rila Mts.: E Rila, 42°07′49″N, 23°08′57″E, 618 m, 28.06.2016, 1 ex., leg. T. Ljubomirov (VS).

***Anthaxia* (*Anthaxia*) *fulgurans fulgurans* (Schrank, 1789)**

fulgurans Schrank, 1789: 85 (*Buprestis*).

muliebris Obenberger, 1918: 22; Bílý, 1984: 147; Sakalian 2003: 125; Sakalian, Langurov (2007): 366; 374.

Material. Central Danubian Plain: Pleven, Kailuka, 250 m, on flowers of *Crataegus monogina*, 30.04.2000, leg. M. Langourov; East Danubian Plain: Dryanovets, 42°40′42″N, 27°21′55″E, 295 m, 21.05.2012, 1 ex., leg. T. Lyubomirov (VS); Vitosha Mts.: Road Bosnek-Chouipetlovo, 1000-1250 m, 18.05.2002, 1 ex., leg. E. Migliaccio (EM); Lozenska Planina Mt.: N Pasarel, 42°34′57″N, 23°28′57″E, 1053 m, 04.07.2013, 1 ex; Thracian Plain: S Krichim, 42°01′25″N, 24°28′05″E, 380 m, 16.05.2013, 1 ex.; Strandzha Mt.: Malko Turnovo, 41°59′34″N, 27°33′12″E, 342 m, 24.05.2012, 1 ex.; SW Gramatikovo, 42°01′19″N, 27°37′28″E, 118 m, 24.05.2012, 1 ex.; S Byala Voda, 42°08′22″N, 27°26′44″E, 191 m, 29.05.2012, 1 ex.; NW Byala Voda, 42°10′49″N, 27°29′33″E, 374 m, 23.06.2012, 1 ex.; Rila Mts: E Rila, 42°07′15″N, 23°08′57″E, 618 m, 28.06.2016, 1 ex., leg. T. Ljubomirov (VS); Malashevska Planina Mt.: W Gorna Breznitsa, 800-900 m, 31.07.2002, 1 ex., leg. E. Migliaccio; Sandanski-Petrich Valley: 2 km S of Kamenitsa, 170-240 m, 31.05.-23.06.2002, tree traps, 1 ex, leg. Langourov; SE slope of Sveti Iliya Hill near Kalimantsi, 450-510 m, 10-11.05.2002, 11 ex., Kalimanska River near Kalimantsi, 12.05.2002, 2 ex., leg. E. Migliaccio (EM); Novo Hodzhovo, 41°24′31″N, 23°23′46″E, 187 m, 04.05.2018, 1 ex., leg. T. Ljubomirov (VS); West Rhodope: Chepelarska River bank, 2 km N of Bachkovo, 29.06.2002, 2 ex., leg. E. Migliaccio (EM); South Black Sea Coast: Vlas, 02.07.1989; Nesebur, May1994, leg. Langer; Sinemorets, 13.05.2002; Kondolovo, 14.05.2002; Sredets, 15.05.2002; Veselie, 16.05.2002, leg. Schmitt; Primorsko, 01.07.2004; Varvara, 02.07.2004; Sozopol, 03.07.2004, leg. W. Ziegler (Niehuis p.c.).

Remarks: *Anthaxia* (*Anthaxia*) *muliebris* Obenberger, 1918 was reported for East Bulgaria by Bílý (1984) and Sakalian (2003), Sakalian, Langurov (2007) citing him. This specimen was found in the collection of S. Bílý (with label 'Arcutino'). Later, after precise study it was established that the specimen belongs to *A. fulgurans*.

***Anthaxia* (*Anthaxia*) *manca* (Linnaeus, 1767)**

Material. West Rhodope Mts.: Bachkovo, on branch of *Juglans regia,* 21.04.2002, 1 ex., leg. D. Doychev (DD).

***Anthaxia* (*Anthaxia*) *kervillei* Théry, 1939**

kervillei Théry, 1939a: 15.

thalassophila pseudokervillei Niehuis, 1990: 57; Sakalian, 2003: 127; Sakalian, Langourov, 2004: 55, 57, 58; Sakalian, Langourov, 2007: 366, 372, 374.

Material. Sandanski-Petrich Valley: 2 Km S of Kamenitsa, 170-240 m, 09.05.2002, 6 ex.; 31.05-23.06.2002, tree traps, 2 ex., leg. M. Langourov; Kalimanska River near Kalimantsi, 12.05.2002, 1 ex.; SE slope of Sveti Iliya Hill near Kalimantsi, 450-510 m, 10-11.05.2002, 1 ex., leg. E. Migliaccio (EM).

Remarks: According to Niehuis, Strauss (2019), *Anthaxia kervillei* is distributed in Bulgaria (Sandanski-Petrich Valley). Studyind our specimens from this region, we have established that their main morphological features are in accordance with those mentioned in this article.

***Anthaxia* (*Anthaxia*) *nitidula* (Linnaeus, 1758)**

Material. West Stara Planina Mts.: roud Milanovo-Staro Selo, 700 m, 31.05.2003, 1 ex., leg. E. Migliaccio (EM).

***Anthaxia* (*Anthaxia*) *passerini* Pecchioli, 1837**

Material. Sandanski-Petrich Valley: SE slope of Sveti Iliya Hill near Kalimantsi, 450-510 m, 10-11.05.2002, 2 ex., leg. E. Migliaccio (EM).

***Anthaxia* (*Anthaxia*) *podolica podolica* Mannerheim, 1837**

Material. Central Stara Planina Mts.: Sokolski Manastir, 42°46′38″N, 25°19′37″E, 907 m, 10.07.2012, 1 ex., leg. O. Todorov (VS); Raklinovo, 18.05.2002; Bakadzhishko-Burgaski Region: Karnobat, 18.05.2002, leg. Schmitt (Niehuis, p.c.); Sofia Plane: Vrazhdebna, 42°42′26″N, 23°24′54″E, 527 m, 11-15.06.2010, 1 ex., leg. T. Lyubomirov (VS); Vitosha Mts.: Road Bosnek-Chouipetlovo, 1000-1250 m, 18.05.2002, 1 ex., leg. E. Migliaccio (EM); Thracian Plain: S Sinitovo, 42°07′34″N, 24°22′17″E, 301 m, 28.04.2020, 1 ex.; Rila Mts.: Belitsa, 42°00′17″N, 23°31′26″E, 1147 m, 14.07.2016, 4 ex.; Boboshevo-Simitli Valley: NW Gorno Leskovo, 41°57′09″N, 22°55′30″E, 781 m, 09.06.2012, 5 ex.; Malashevska Planina Mt.: Gorna Breznitsa, 41°44′24″N, 23°19′37″E, 907 m, 10.07.2012, 1 ex., leg. T. Ljubomirov (VS); Pirin Mts.: NE Lilyanovo, 41°38′54″N, 23°21′25″E, 1033 m, 30.06.2016, 2 ex., leg. M. Naumova; Belasitsa Mt.: S Petrich, 20.05.2016, 583 m, 2 ex., leg. T. Ljubomirov (VS); West Rhodope: Chepelarska River bank, 2 km N of Bachkovo, 29.06.2002, 1 ex.; Road Dospat-Smolyan, 22.07.2001, 2 ex., leg. E. Migliaccio (EM); Chervenata Stena Protected area, 41°54′15″N, 24°52′44″E, 1310 m, 26.06.2014, 6 ex., leg. T. Lyubomirov; East Rhodope: Kardzhali, 41°37′10″N, 25°20′28″E, 346 m, 22.06.2018, 1 ex., leg. P. Boyadzhiev (VS); North Black Sea Coast: Road Varna-Kamtsiya, 04.07.1972; 06.07.1972; 07.07.1972, leg. J. Bročík; South Black Sea Coast: Nesebar, May 1994, leg. Langer; Primorsko, 16.05.2002; Ahtopol, 13.05.2002, leg. Schmitt; Ropotamo Protected area near Sozopol, 26.06.2003, 23 ex., leg. E. Migliaccio (EM); Djuni south of Burgas, 27.06.2004, Primorsko, 27.06.2004, leg. W. Ziegler (Niehuis p.c.).

***Anthaxia* (*Anthaxia*) *salicis salicis* (Fabricius, 1777)**

Material. East Stara Planina Mts.: NE Krivini, 42°57′24″N, 27°40′48″E, 70 m, 15.05.2012, 7 ex., Strandzha Mt.: SW Gramatikovo, 42°01′19″N, 27°37′28″E, 118 m, 24.05.2012, 1 ex., leg. T. Lyubomirov (VS).

***Anthaxia* (*Anthaxia*) *semicuprea* Küster, 1851**

Material. Lozenska Planina Mt.: N Pasarel, 42°34′40″N, 23°29′10″E, 1010 m, 04.07.2013, 1 ex.; Sandanski-Petrich Valley: S Petrich, 20.05.2016, 1 ex., leg. T. Ljubomirov (VS); South Black Sea Coast: Primorsko, 02.07.2004, leg. W. Ziegler (Niehuis p.c.).

***Anthaxia* (*Anthaxia*) *senicula senicula* (Schrank, 1789)**

senicula Schrank, 1789: 85(*Buprestis*).

Synonym: *deaurata* Gmelin, 1790: 1934 (*Buprestis*); Sakalian, 2003: 131; Sakalian, Langourov, 2007: 366.

Material. Sandanski-Petrich Valley: Hills near General Tdorov Vill., 120 m, 08.04.2006, collected on *Pyrus* sp. flowers, 6 ex. Many more specimens were observed on these flowers, leg. V. Gashtarov (VG).

***Anthaxia* (*Anthaxia*) *signaticollis* Krynicki, 1832**

Material. East Danubian Plain: N Granitchar, 43°43′45″N, 28°30′26″E, 59 m, 11.06.2018, 3 ex., leg. T. Lyubomirov; West Stara Planina Mts.: Iskar Valley, SE Pasarel, 720 m, 12.06.-24.07.2002, 1 ex., leg. T. Toshova; Central Stara Planina Mts.: Enina, 01.06.2000, 1 ex., leg. M. Langourov; Stanchov Han, 42°48′ 32″N, 25°33′59″E, 580 m, 24.05.2012, 1 ex.; Velchectsi, 42°47′52″N, 25°34′08″E, 655 m, 26.05.2012, 1 ex.; Ezeroto, 42°46′03N, 25°21′58E, 705 m, 22.06.2012, 2 ex.; Sokolski Manastir, 42°46′38″N, 25°19′37″E, 907 m, 10.07.2012, 2 ex., leg. O. Todorov; East Stara Planina Mts.: W Belodol, 42°43′08″N, 27°25′51″E, 259 m, 20.05.2012, 5 ex.; Sofia Plain: W Milanovo, 43°05′40″N, 23°23′23″E, 764 m, 24.05.2015, 2 ex., leg. T. Lyubomirov (VS); Vitosha Mts.: Road Bosnek-Chuipetlovo, 1000-1250 m, 18.05.2002, 1 ex., leg. E. Migliaccio (EM); Thracian Plain: W Stryama, 42°15′19″N, 24°50′52″E, 174 m, 14.04.2018, 4 ex.; E Tatkovo, 41°58′53″N, 25°35′34″E, 293 m, 08.06.2016, 1 ex.; Strandzha Mt.: W Vizitsa, 42°97′32″N, 27°34′11″E, 243 m, 23.05.2012, 1 ex.; S Byala Voda, 42°08′22″N, 27°26′44″E, 191 m, 15.05.2012, 1 ex.; 23.06.2012, 1 ex., W Malko Tarnovo, 41°59′34″N, 27°33′12″E, 342 m, 24.05.2012, 1 ex.; SW Gramatikovo, 42°01′19″N, 27°37′28″E, 118 m, 24.05.2012, 2 ex.; Malashevska Planina Mt.: Gorna Breznitsa, 41°44′24″N, 23°06′01″E, 762 m, 10.07.2013, 1 ex., leg. T. Lyubomirov (VS); Sandanski-Petrich Valley: N Kresna, 300-600 m, 30.05.2003; Ilendenci, 600 m, 01.06.2003, leg. Buchbach & Steidel (Niehuis p.c.); 2 km S of Kamenitsa, 170-240 m, 09.05.2002, 1 ex.; West Rhodope Mts.: Bachkovo Monastery, 29.06.2002, 1 ex.; Road Kostandovo-Velingrad, 27.06.2002, 1 ex., leg. E. Migliaccio (EM); SE Bachkovo, 41°56′14″N, 24°51′45″E, 510 m, 15.05.2013, 6 ex.; Chervenata Stena Protected area, 41°54′15″N, 24°52′44″E, 1310 m, 26.06.2014, 7 ex., leg. T. Lyubomirov (VS); East Rhodope Mts.: Madzarovo, 200 m, 01-03.05.2003, collected on *Crataegus monogina* flowers, leg. V. Gashtarov (VG); North Black Sea Coast: Albena, 29.05.1975, leg. Langer; Albena, 28.06.2004; Staro Oryachovo, 28.06.2004, leg. W. Ziegler; South Black Sea Coast: Kavatsite, 13.05.2002; Ahtopol, 13.05.2002; Lozenets, 13.05.2002; Sinemorets, 13.05.2002; Kondolovo, 14.05.2002, leg. Schmitt; Primorsko, 02.07.2004, leg. W. Ziegler (Niehuis p.c.); Ropotamo Protected area, 26.06.2003, 4 ex., leg. E. Migliaccio (EM).

***Anthaxia* (*Anthaxia*) *suzannae* Théry, 1942**

Material. West Stara Planina Mts.: Lyutibrod, 10.05.1992, 1 ex., leg. V. Sakalian, det. V. Kubáň; Surnena Sredna Gora Mt.: Kolena, 42°29′41″N, 25°43′00″E, 317 m, 16.05.2016, 1 ex., leg. E. Chehlarov, det. V. Sakalian; Mesta Valley: Gotshe Delchev, 23.05.1987, 1 ex., leg. V. Sakalian, det. V. Kubáň (VS).

Remarks: This species was reported for Bulgaria by Kubáň et al. (2016). There haven't been any exact localities published for this country until now.

***Anthaxia* (*Cratomerus*) *diadema diadema* Fischer von Waldheim 1824**

Material. Sandanski-Petrich Valley: Kresna Gorge, 24.06.1934, 1 ex., leg. Kr. Tuleschkov (VS); South Black Sea Coast: Primorsko, 27.06.2004, leg. W. Ziegler (Niehuis p.c.).

***Anthaxia* (*Cratomerus*) *hungarica hungarica* (Scopoli, 1772)**

Material. West Stara Planina Mts.: Berkovitsa, 07.05.2003, 2 ex., leg. D. Doychev (DD); Central Stara Planina Mts.: Kutelka Protected area, 42°43′40″N, 26°19′53″E, 626 m, 02.06.2014, 1ex.; East Stara Planina Mts.: Peshtersko, 24°43′21″N, 27°20′00″E, 247 m, 20.05.2012, 1 ex.; Thracian Plain: Assenovgrad, 16.05.2016, 1 ex., leg. T. Ljubomirov (VS); Sandanski-Petrich Valley: Sveti Iliya Hill near Kalimantsi, 450-510 m, 10-11.05.2002, 1 ex.; Chuypetel North of Katountsi, 350 m, 12.05.2002, 1 ex., leg. E. Migliaccio; 2 km S Kamenitsa 170-240 m, 31.05.-23.06. 2002, tree traps, 1 ex, leg. Langourov; West Rhodope Mts.: Bachkovo Monastery, 29.06.2002, 1 ex., leg. E. Migliaccio (EM); Bachkovo, 15.05.2003, 4 ex., leg. D. Doychev (DD).

***Anthaxia* (*Cratomerus*) *scorzonerae* (Frivaldszky, 1837)**

Material. East Stara Planina Mts.: Peshtersko, 24°43′21″N, 27°20′00″E, 247 m, 20.05.2012, 1 ex.; Surnena Sredna Gora Mt.: S Zelenikovo, 42°22′50″N, 25°04′43″E, 290 m, 27.04.2018, 7 ex., leg. T. Lyubomirov (VS); Sandanski-Petrich Valley: 2 km S of Kamenitsa, 170-240 m, 09.05.2002, 1 ex.; Sveti Iliya Hill near Kalimantsi, 450-510 m, 10-11.05.2002, 2 ex., leg. E. Migliaccio (EM); N Kresna, 300-600 m, 30.05.2003; Ilindenci, 450 m, 31.05.2003, leg. Buchbach & Steidel (Niehuis p.c.); West Rhodope Mts.: Bachkovo, 30.06.2001, 2 ex.; 29.05.2004, 1ex., leg. D. Doychev (DD); Bachkovo Monastery, 29.06.2002, 7 ex., leg. E. Migliaaccio (EM); S Krichim, 42°01′25″N, 24°28′05″E, 380 m, 16.05.2013, 1 ex.; North Black Sea Coast: SE Dobrich, 42°01′11″N, 25°32′09″E, 120 m, 27.04.2018, 2 ex., leg. T. Lyubomirov (VS); South Black Sea Coast: Primorsko, 27.06.2004; Djuni South of Burgas, 27.06.2004; Achtopol, 02.07.2004; Veselie, 03.07.2004, leg. W. Ziegler (Niehuis p.c.).

***Anthaxia* (*Cratomerus*) *sponsa* Kiesenwetter, 1857**

sponsa Kiesenwetter, 1857: 82.

eugeniae Ganglbauer, 1885: 317; Sakalian, 2007: 12.

Material. Sandanski-Petrich Valley: Kalimantsi, 05.05.2003, 1 ex., leg. S. Lazarov (VS). **Remarks:** Sakalian (2007) reported: '*Anthaxia* (*Cratomerus*) *eugeniae* South-West Bulgaria: Pejo Yavorov Station, 10.06.1988, 2 ex., V. Sakalian leg. & det.; 2 km W Kresna, 600 m, 27.05.2003; 3 km W Kresna, 800 m, 28.05.2003, Buchbach & Steidel leg., M. Niehuis det. New record for Bulgaria'. After precise study of the recorded spec-

imens, which are collected and determined by V. Sakalian, V. Kubáň and V. Sakalian established that they are related to *A. sponsa*. M. Niehus has female specimens from the above listed German collectors (p.c). Due to the great difficulty in the separation of females in both species, he is not qute sure in the right identification of them and it is very likely that they belong to *A. sponsa*.

***Anthaxia* (*Haplanthaxia*) *cichorii* (Olivier, 1790)**

Material. Boboshevo-Simitli Valley: 7 km from Simitli, 18.07.2001, 1 ex., leg. E. Migliaccio (EM); Maleshevska Mt.: Gorna Breznitsa, 600-1000 m, 09.07.2002, 1 ex., leg. B. Gueorgiev; Gorna Breznitsa, 810 m, 14.06-03.07.2002, yellow traps, 1 ex., leg. T. Ljubomirov (VS); North Black Sea Coast: Road Varna-Kamčiya, 01-07.07.1972, leg. J. Bročík; Albena, 28.06.2004, leg. W. Ziegler (Niehuis p.c.); South Black Sea Coast: Ropotamo Protected area, 26.06.2003, 1 ex., leg. E. Migliaccio (EM); Djuni South of Burgas, 27.06.2004; Primorsko, 27.06.2004; Sozopol, 01-08.07.2004; Achtopol, 02.07.2004; Varvara, 02.07.2004; Veselie, 03.07.2004, leg. W. Ziegler (Niehuis p.c.).

***Anthaxia* (*Haplanthaxia*) *hypomelaena* (Illiger, 1803)**

Material. Sandanski-Petrich Valley: Kalimantsi, 05.05.2003, 1 ex., leg. S. Lazarov; North Black Sea Coast: SW Balchik, 43°23′41″N, 28°06′20″E, 219 m, 11.06.2018, 1 ex., leg. T. Lyubomirov (VS); South Black Sea Coast: Sozopol, 01-08.07.2004, leg. W. Ziegler (Niehuis p.c.).

***Anthaxia* (*Haplanthaxia*) *kiesenwetteri* Marseul, 1865**

Material. Sakar-Tundzha Region: S Rajkova Mogila, 41°47′54″N, 26°17′05″E, 138 m, 20.06.1012, 1 ex., leg. T. Lyubomirov (VS); Boboshevo-Simitli Valley: 7 km of Simitli, 18.07.2001, 5 ex.; South Black Sea Coast: Ropotamo Protected area, 26.06.2003, 1 ex., leg. E. Migliaccio (EM); Djuni South of Burgas, 27.06.2004, leg. W. Ziegler (Niehuis p.c.).

***Anthaxia* (*Haplanthaxia*) *millefolii millefolii* (Fabricius, 1801)**

Material. Central Stara Planina Mts.: Tvardishka Planina Mt., 42°45′40″N, 25°58′03″E, 1054 m, 23.07.2012, 1 ex., leg. T. Ljubomirov (VS); Strandzha Mt.: Marina Reka Proted area, 5 km NE Bulgari, 160 m, 25-28.06.2003, 1 ex.; Boboshevo-Simitli Valley: 7 Km of Simitli, 25.06.2002, 1 ex., leg. E. Migliaccio (EM); Maleshevska Planina Mt: Gorna Breznitsa, 600-1000 m, 09.07.2002, 4 ex., 290 m, 09.07.2002, 1 ex., 740 m, 11.07.2002, 15 ex.; W Gorna Breznitsa, 41°44′24″N, 23°06′01″E, 762 m, 10.07.2013, 3 ex., leg. T. Ljubomirov (VS); Manastir Gorna Breznitsa, 550 m, 30-31.07.2002, yellow traps, 8 ex., leg. E. Migliaccio; Sandanski-Petrich Valley: 2 km S Kamenitsa, 170-240 m, 31.05-23.06.2002, tree traps, 4 ex, leg. M. Langourov; Kurlanovo, 10.07.2002, 1 ex, leg. S. Lazarov; Sveti Iliya Hill near Kalimantsi, 170-240 m, 01-22.06.2002, tree traps, 1 ex., leg. M. Langourov; Kresna Gorge: Pejo Yavorov, 19.07.2002, 1 ex., leg. E. Migliaccio (EM); Marikostenska Tumba near Novo Konomladi, reared from branches of *Querqus pubescens*, sample collection – 14.04.2003, adult emergence – 05.2003, 2 ex. leg. V. Gashtarov (VG); West Rhodope Mts.: 2 km N of Bachkovo, 29.06.2002, 1 ex., leg. E. Migliaccio (EM); East Rhodope Mts.: near Ivailovgrad, reared from branches of *Amygdalus comunius*, sample collection – 05.05.2003, adult emergence – May 2003, 1

ex., leg. V. Gashtarov (VG); North Black Sea Coast: Albena, June 1969, leg. J. Bročík; 28.06.2004, leg. W. Ziegler; South Black Sea Coast: Vlas, 02.07.1989, leg. Langer; Primorsko, 01.07.2004, leg. W. Ziegler (Niehuis p.c.).

***Anthaxia* (*Haplanthaxia*) *olympica* Kiesenwetter, 1880**

Material. Sofia Plain: Kremikovtsi, 42°47′18″N, 23°28′52″E, 655 m, 01.06.-03.07.2017, Malaise trap, 1 ex.; Thracian Plain: Maluk Chardak, 42°16′44″N, 24°38′48″E, 198 m, 30.05.2018, 1 ex., leg. T. Lyobomirov (VS); Sandanski-Petrich Valley: Roupite near Petrich, 27.06.2002, 1 ex., leg. E. Migliaccio (EM); Rila: Belitsa, 42°00′17″N, 23°31′26″E, 1147 m, 14.07.2016, 1 ex., leg. T. Ljubomirov (VS); West Rhodope: Kostandovo, 27.06.2002, 1 ex., leg. E. Migliaccio (EM); South Black Sea Coast: Djuni South of Burgas, 27.06.2004; Sozopol, 01-08.07.2004; Achtopol, 02.07.2004; Varvara, 02.07.2004, leg. W. Ziegler (Niehuis p.c.).

***Anthaxia* (*Haplanthaxia*) *praeclara praeclara* Mannerheim, 1837**

Material. Sandanski-Petrich Valley: Sveti Iliya Hill near Kalimantsi, 450-510 m, soil traps, 1 ex., 01-22.06.2002; leg. M. Langourov; 22.06.-06.08.2002, soil traps, 2 ex., leg. D. Chobanov (EM).

***Anthaxia* (*Haplanthaxia*) *rossica* Daniel, 1903**

Material. Boboshevo-Simitli Valley: 7 km of Simitli, 25.06.2002, 3 ex., leg. E. Migliaccio (EM); Maleshevska Planina Mt.: Gorna Breznitsa, 290-1000 m, 09-11.07.2002, 4 ex.; W Gorna Breznitsa, 41°44′24″N, 23°06′01″E, 762 m, 10.07.2013, 5 ex., leg. T. Ljubomirov (VS); Manastir Gorna Breznithsa, 550 m, 30-31.07.2002, yellow traps, 4 ex., leg. E. Migliaccio (EM); Belasitsa Mt.: Belasitsa, 700 m, 12.06.2003, 2 ex., leg. D. Doychev (DD); Rila: Sestrimo, 42°12′03″N, 23°54′33″E, 820 m, 1ex.; South Rila, Belitsa, 42°00′17″N, 23°31′26″E, 1147 m, 14.07.2016, 6 ex., leg. T. Ljubomirov (VS); West Rhodope Mts.: Bachkovo, 30.06.2001, 2 ex., leg. D. Doychev (DD); Yundola, 1460 m, 22.06.2003, 6 ex.; Bachkovo Monastery, 29.06.2002; 18 ex.; Road Yakoruda-Velingrad, 850 m, 20.07.2001, 3 ex.; South Black Sea Coast: SE Lozenets, 24.06.2003, 1 ex., leg. E. Migliaccio (EM).

***Anthaxia* (*Melanthaxia*) *godeti* Gory & Laporte, 1839**

Material. Central Stara Planina Mts.: N Enina, 42°40′41″N, 25°24′54″E, 567 m, 28.06.2014, 2 ex., leg. T. Ljubomirov (VS); Vitosha Mts.: Momina Skala, 1500 m, 01.07.2001, 1 ex.; Strandzha Mts.: Marina Reka Protected area, 5 km NE of Bulgari, 160 m, 25-28.06.2003, 4 ex., leg. E. Migliaccio (EM); Osogovska Planina Mt.: E Vetren, 42°04′14″N, 22°46′38″E, 1260 m, 28.06.2016, 27 ex., leg. T. Ljubomirov (VS); Rila Mts.: Road Borovets-Raduil, 1200 m, 26.07.2001, 7 ex.; Malashevska Planina Mt.: Manastir Gorna Breznitsa, 550 m, 30-31.07.2002, 5 ex.; Pirin Mts.: Road Bunderitsa-Vihren, 19.07.2001, 1 ex.; West Rhodope Mts.: Road Iakorouda-Velingrad, 850 m, 20.07.2001, 7 ex.; Road Sarnitsa-Velingrad, 1500 m, 21.07.2001, 2 ex.; Yundola, 1460 m, 27.06.2002, 5 ex.; 28.06.2002, 4 ex.; 22.06.2003, 32 ex.; Dospat dam, 1200 m, 26.06.2002, 1 ex.; Batak dam, 1140 m, 28.06.2002, 3 ex., leg. E. Migliaccio (EM); NW Dobrostan, 41°54′33″N, 24°53′19″E, 1411 m, 10.07.2013, 2 ex.; NW Dobrostan, 41°55′00″N, 24°53′04″E, 1425 m, 10.07.2013, 3 ex.; Martsiganitsa Hut, 41°53′31″N, 24°52′54″E, 1351 m, 24.08.2013, 8 ex.; Chervenata Stena Protected area, 41°54′15″N,

24°52′44″E, 1310 m, 26.06.2014, 1 ex., N Ravnogor, 41°58′27″N, 24°25′37″E, 1166 m, 29.06.2016, 1 ex.; Lilkovo, 41°56′35″N, 24°36′33″E, 1186 m, 11.07.2016, 1 ex.; S Rakitovo, 41°53′07″N, 24°04′13″E, 1632 m, 17.08.2016, 4 ex., leg. T. Lyubomirov (VS); South Blask Sea Coast: Primorsko, 01.07.2004, leg. W. Ziegler (Niehuis p.c.).

***Anthaxia* (*Melanthaxia*) *helvetica helvetica* Stierlin, 1868**

Material. Rila Mts.: Belmeken, 2300 m, 23.07.1939, 18 ex., leg. Pittioni (VS); Pirin Mts.: Road Bunderitsa-Vihren, 19.07.2001, 1 ex.; Vihren, 2350 m, 23-24.06.2002, 3 ex.; West Rhodope Mts.: Road Iakorouda-Velingrad, 850 m, 20.07.2001, 1 ex.; Dospat dam, 1200 m, 26.06.2002, 1 ex.; Yundola, 27.06.2002, 1 ex.; Batak dam, 1140 m, 28.06.2002, 2 ex.; Velingrad, 28.06.2002, 1 ex., leg. E. Migliaccio (EM).

***Anthaxia* (*Melanthaxia*) *istriana* (Rosenhauer, 1847)**

Material. Sandanski-Petrich Valley: 2 km South of Kamenitsa, 170-240 m, 31.05.-23.06.2002, tree traps, 1 ex., leg. M. Langourov (EM).

***Anthaxia* (*Melanthaxia*) *morio* (Fabricius, 1792)**

Material. Pirin Mts.: Bansko, 1500 m, 21.06.2003, 1 ex., leg. E. Migliaccio (EM).

***Anthaxia* (*Melanthaxia*) *frankenbergeri* Obenberger, 1933**

frankenbergeri Obenberger, 1933b: 115.

Synonym: *muehlei* Niehuis, 1983: 91; Sakalian, 1990: 39; 2003: 146; Sakalian, Langurov, 2007: 366; 372.

Material. Vlahina Planina Mt.: Gabra Protected area, 42°01′30-55″N, 22°50′36-38″E, 959-1070 m, 16-17.07.2013, *Pinus nigra* relict forest, many specimens collected by V. Kuban (four specimens are kept in the collection of VS); West Rhodope Mts.: NW Dobrostan, 41°55′00″N, 24°53′04″E, 1425 m, 10.07.2013, 9 ex.; NW Dobrostan, 41°54′33″N, 24°53′19″E, 1041 m, 10.08.2013, 3 ex.; Martsiganitsa Hut, 41°54′16″N, 24°51′59″E, 1431 m, 24.08.2013, 1 ex.; SW Orehovo, 41°51′34″N, 24°35′56″E, 1217 m, 30.08.2015, 2 ex., leg. T. Lyubomirov (VS).

***Anthaxia* (*Melanthaxia*) *quadripunctata quadripunctata* (Linnaeus, 1758)**

Material. West Strara Planina Mts.: Barziya, reared from branch of *Pinus sylvestris*, sample collection – September 2001, adult emergence – 27.03.2002, 1 ex., leg. D. Doychev (DD); Central Stara Planina Mts.: Mahnati Skali Protected area, 42°45′49″N, 25°28′21″E, 1325 m, 07.09.2012, 1 ex., leg. O. Todorov (VS); Vitosha Mts.: Momina Skala, 1485 m, 09.06.2002, 1 ex.; Road Momina Skala-Ofelia, 1485-1500 m, 22.06.2002, 1 ex.; Zlatni Mostove Resort, 22.06.2002, 1 ex.; Aleko, 1700 m, 07.07.2002, 2 ex.; Rila Mts.: Borovets, 1300 m, 10.07.2002, 1 ex.; Road Beli Iskar-Treshtenik, 1600 m, 25.08.2001, 1 ex., leg. E. Migliaccio (EM).

***Anthaxia* (*Melanthaxia*) *tenella tenella* Kiesenwetter, 1858**

Material. Pirin Mts.: Road Bunderitsa-Vihren, 1700 m, 19.07.2001, 4 ex., leg. E. Migliaccio (EM).

***Anthaxia* (*Melanthaxia*) *thessalica* Brandl, 1981**

Material. Middle Stara Planina Mts..: Buzovets Peak, 42°47′32″N, 25°32′37″E, 819 m, 26.05.2012, 1 ex., leg. O. Todorov (VS); Sofia Plain: Bezden, 400 m, 07.06.2003,

leg. Buchbach & Steidel (Niehuis p.c.); Lozenska Planina Mt.: N Pasarel, 42°33′06″N, 23°29′31″E, 820 m, 04.07.2013, 1 ex., leg. T. Ljubomirov (VS); Vitosha Mts.: Bosnek, 1000 m, 01.06.2002, 1 ex., leg. E. Migliaccio (EM); Ihtimanska Sredna Gora Mt.: Verinsko, under the bark of *Pinus nigra*, 29.04.2003, 1 ex., leg. D. Doychev (DD); Maleshevska Planina Mt.: N Gorna Breznitsa, 320 m, 03.05.2003, 2 ex., leg. T. Lyubomirov (VS); Sandanski-Petrich Valley: SE slope of Sveti Iliya Hill near Kalimantsi, 450-510 m, 10-11.05.2002, 10 ex., leg. E. Migliaccio (EM); Ilendenci, 450 m, 31.05.2003, leg. Buchbach & Steidel (Niehuis p.c.).

Tribe Buprestini Leach, 1815

***Buprestis* (*Ancylocheira*) *haemorrhoidalis haemorrhoidalis* Herbst, 1780**

Material. Osogovska Planina Mt.: Lisets, 20.05.-20.08.2004, pheromone trap for *Ips acuminatus*, 1 ex.; West Rhodope Mts.: Yundola, 15.06.2000, 1 ex.; Yakoruda, 890 m, on a *Pinus sylvestris* trunk, 19.07.2013, 1 ex., leg. D. Doychev (DD).

***Buprestis* (*Ancylocheira*) *novemmaculata novemmaculata* Linnaeus, 1767**

Material. Malashevska Planina Mt.: Tseparevo, 41°37′N, 25°04′E, 950 m, 27.06.2008, 1 ex., leg. T. Ljubomirov (VS); Slavyanka Mt.: Goleshevo, 1750 m, on *Pinus heldreishi*, 20.07.2007, leg. G. Georgiev (GG); West Rhodope Mts.: Borino, in a *Pinus sylvestris* trunk, 15.05.2011, 2 ex.; Pirin Mts.: Mura Hut, on a *Pinus nigra* trunk, 18.06.2005, 3 ex., leg. D. Doychev (DD).

***Buprestis* (*Ancylocheira*) *rustica rustica* Linnaeus, 1758**

Material. West Stara Planina Mts.: Petrohan Pass, 1436 m, 13.08.2015, 2 ex., leg. T. Ljubomirov (VS); Pirin Mts.: Road Bunderitsa-Vihren, 19.07.2001, 1 ex., leg E. Migliaccio (EM); Slavyanka Mt.: Goleshevo, 1400 m, on *Pinus nigra*, 09.06.2007, leg. G. Georgiev (GG); West Rhodope Mts.: Road Yakoruda-Velingrad, 20.07.2001, 5 ex., leg. E. Migliaccio (EM); Yundola, 22.07.2002, 1 ex.; Road Yudola-Belmeken, 05.08.2002, 2 ex., leg. D. Doychev (DD).

***Buprestis* (*Buprestis*) *octoguttata octoguttata* Linnaeus, 1758**

Material. Thracian Plain: Semchinivo, 42°10′15″N, 24°03′54″E, 661 m, 13.07.2016, 1 ex., leg. T. Ljubomirov (VS); West Rhodope Mts.: Byala Cherkva, on *Pinus nigra* branches, 17.07.2004, 3 ex.; Yakoruda, 930 m, 31.07-13.08.2013, pheromone trap for *Monochamus galloprovincialis*, 1 ex., leg. D. Doychev (DD).

***Eurythyrea aurata* (Pallas, 1776)**

Material. Sandanski-Petrich Valley: Melnisha River near Novo Konomladi, 01-17.07.2005, 9 ex., leg. V. Gashtarov (VG).

Tribe Chrysobothrini Gory & Laporte, 1938

***Chrysobothris* (*Chrysobothris*) *affinis affinis* (Fabricius, 1794)**

Material. West Stara Planina Mts.: 4 km S of Barziya, 43°09′19″N, 23°08′51″E, 750 m, under the bark of *Fagus sylvatica*, 01.04.2017, 4 ex., leg. D. Doychev (DD); Bakazhishko-Burgas Region: Elhovo, Popovo, 15.05.2002, leg. Schmitt (Niehuis p.c.);

Strandzha Mt.: Marina Reka Protected area, 5 km NE of Bulgari, 160 m, 25-28.06.2003, 31 ex., leg. E. Migliaccio (EM); Maleshevska Planina Mt.: S of Krupnik, 1200-1300 m, Beech forest, 05.07.2003, 2 ex., leg. T. Lyubomirov (VS); Sandanski-Petrich Valley: 2 km S of Kamenitsa, 170-240 m, 23.06.-08.08.2002, tree traps, leg. D. Chobanov (EM); Belasitsa Mt.: Belasitsa Vill., on branch of *Castanea sativa,* 27.06.2004, 1 ex., leg. D. Doychev (DD); West Rhodope Mts.: Velingrad, 28.06.2002, 1 ex., leg. E. Migliaccio (EM); South Black Sea Coast: Krushevets, 17.05.2002, leg. Schmitt; Sozopol, 01-08.07.2004, leg. W. Ziegler (Niehuis p.c.).

***Chrysobothris* (*Chrysobothris*) *igniventris* Reitter, 1895**

Material. Malashevska Planina Mt.: 2 km SW of Mikrevo, 41°36′33.9" N 23° 10′ 40.5", E, 350 m., reared from a *Cedrus libani* trunk, sample collection – 08.04.2018, adult emergence – 18.06.2018, 4 ex., 29.06.2018, 1 ex.; West Rhodope: Bachkovo, reared from *Pinus sylvestris*, 21.04.2002, 4 ex., leg. D. Doychev (DD).

***Chrysobothris (Chrysobothris) solieri* Laporte & Gory, 1837**

Material. Belasitsa Mt.: near Petrich, 41°23′13"N, 23°12′09"E, 320 m, reared from *Pinus rigida* branches, sample collection – 06.05.2004, adult emergence – 07.07.2004., 1 ex.; East Rhodope Mts.: Kavak Dere near Ivaylovgrad, reared from *Pinus nigra* branches, sample collection – 18.04.2003, adult emergence – 02.09.2003, 1 ex., leg. D. Doychev (DD).

***Chrysobothris leonhardi* Obenberger, 1916**

Material. Volcanic hill Kozuch, 1 ex., reared from *Paliurus spina-christi* branches, June 2003, 1 ex., leg. V. Gashtarov (VG); near Stara Zagora, 10.07.2005, 1 ex., on *Pyrus* sp., leg. G. Murzov (VG).

Remarks: *Paliurus spina-christi* is a new host plant, which belongs to a new host family (Rhamnaceae) for this species.

Tribe Melanophilini Bedel, 1921

***Melanophila acuminata* (De Geer, 1774)**

Material. West Stara Planina Mts.: Berkovitsa, 09.07.1963, 1 ex., leg. G. Peschev (VS); Vitosha Mts: Zlatni Mostove Resort, 22.06.2002, 3 ex,; Ofeliite, 1500 m, 22.06.2002, 3 ex., 08.07.2002, 1 ex., leg. Migliaccio (EM).

***Phaenops cyanea* (Fabricius, 1775)**

Material. Pirin Mts.: Bansko, 1500 m, 21.06.2003, 1 ex.; West Rhodope Mts.: Yundola, 28.06.2002, 1 ex.; Velingrad, 28.06.2002, 1ex., leg. E. Migliaccio (EM).

***Phaenops knoteki knoteki* Reitter, 1898**

Material. Rila Mts.: Borovets, mixed *Pinus-Abies* forest, 19.07.2013, leg. V. Kubáň (2 ex. in collection of VS).

***Trachypteris picta decastigma* (Fabricius, 1787)**

Material. Lozenska Planina Mt.: N Pasarel, 42°34′18″N, 23°29′40″E, 933 m, 04.07.2013, 1 ex.; Sakar-Tundzha Region: E Biser, 41°53′03″N, 26°02′41″E, 62 m, 26.06.2012, 1 ex., leg. T. Ljubomirov (VS).

In conclusion, it can be stated that the new data contributes to the better understanding of the species distribution and host plants of the Buprestinae subfamily in Bulgaria.

Acknowledgements

We would like to thank very much Dr. M. Niehuis (Albersweiler, Germany) for sending us interesting and useful data about the distribution of jewel beetles in Bulgaria. We are also thankful to Ing. V. Kubáň (Brno, Czechia), Dr. T. Ljubomirov, Dr. M. Langourov, Dr. D. Chobanov, Dr. M. Naumova, Dr. T. Teofilova, Dr. T. Toshova, Mr. N. Karaivanov, Dr. S. Lazarov, Dr. N. Kozhabashev, Dr. E. Chehlarov (Sofia, Bulgaria), Dr. O. Todorov, Dr. P. Boyadzhiev (Plovdiv, Bulgaria) and Mr. G. Murzov (Stara Zagora, Bulgaria) for providing us with important information and buprestid beetles for study.

References:

Bílý, S. 1984. Taxonomical and biological notes on Buprestidae from Turkey (Coleoptera). – Turkey Bitki Korma Derneği, 8, 143-149.

Guéorguiev, V., V. Sakalian, B. Guéorguiev. 1997. Biogeography of the endemic Balkan ground beetles (Coleoptera: Carabidae) in Bulgaria. Pensoft Publishers, Sofia – Moscow, 74 pp.

Kubáň, V., M.G. Volkovitsh, M.Yu. Kalashian, E. Jendek. 2016. Buprestidae. – In: Löbl, I., D. Löbl (Eds.). Catalogue of Palaearctic Coleoptera. Volume 3, Revised and updated edition. Scarabaeoidea, Scirtoidea, Dascilloidea, Buprestoidea and Byrrhoidea. Brill, Leiden – Boston, pp. 19-32, 432-574.

Niehuis, M., G. Strauss. 2019. *Anthaxia (Anthaxia) hirschfelderi* sp. nov., ein neuer Prachtkäfer aus dem Süden der Türkei (Coleoptera: Buprestidae). – Entomologische Zeitschrift, 129 2), 79-87.

Sakalian, V. 1990. A contribution to the study of the family Buprestidae (Coleoptera) in Bulgaria. – Acta zoologica bulgarica, 39, 37-41. (In Bulgarian).

Sakalian, V. 2003. A Catalogue of the Jewel Beetles of Bulgaria (Coleoptera: Buprestidae). Zoocartographia Balcanica. 2. Pensoft Publisher, Sofia-Moscow, 246 pp.

Sakalian, V. 2007. Contribution to the knowledge of the Jewel Beetles (Coleoptera: Buprestidae) of Balkan Peninsula. II. – Acta zoologica bulgarica, 59(1), 11-16.

Sakalian, V., M. Langourov. 2004. Colour traps a method for distributional and ecological investigations of Buprestidae (Coleoptera). – Acta Sociatatis Zoologicae Bohemicae, 68, 53-59.

Sakalian, V., M. Langourov. 2007. Fauna and Zoogeography of Jewel Beetles (Coleoptera: Buprestidae) in Bulgaria. – In: Fet, V., A. Popov (Eds.). Biogeography and Ecology of Bulgaria. Monographiae Biologicae, Vol. 82, Springer, 357-378.